

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2003/001451

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. 7: C07K 7/06, 7/08, 14/05, 16/08, C07H 21/04, C12N 15/79, A61K 38/08, 38/10, 31/7088, A61P 31/20, G01N 33/53, 33/566, 33/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
STN File Registry and ANGIS: Sequences based on ID nos 9-50, and Seq Id no. 81

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 1999/002550 A1 (THE COUNCIL OF THE QUEENSLAND INSTITUTE OF MEDICAL RESEARCH et al) 21 January 1999 See whole document, especially Seq Id nos. 32 & 33, and see also Seq Id nos. 2-5, 7-11	1, 13, 14, 18-21, 23, 26, 27, 30, 34-36, 39, 42-50
X	EP 1 229 043 A1 (CYTO-BARR B.V.) 7 August 2002 See whole document, particularly Seq Id nos. 1-3, especially Seq Id no. 3	1, 2, 7, 8, 12, 14, 18, 19, 23, 26, 27, 30, 34-36, 39, 42-50

☒ Further documents are listed in the continuation of Box C ☒ See patent family annex

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
4 February 2004

Date of mailing of the international search report 11 FEB 2004

Name and mailing address of the ISA/AU
AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaustalia.gov.au
Facsimile No. (02) 6285 3929

Authorised officer

G. D. HEARDER

Telephone No : (02) 6283 2553

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2003/001451

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2002-255997 A (AICHI PREFECTURE) 11 September 2002 See machine translation: [online], [retrieved on 15 January 2004]. Retrieved from the Internet: http://www19.ipdl.jpo.go.jp/PA1/cgi-bin/PA1INDEX See sequences 1-22, especially sequence 19	1, 2, 7, 14, 18, 19, 23, 26, 27, 30, 34-36, 39, 42-53
X	LEEN A et al.: "Differential Immunogenicity of Epstein-Barr Virus Latent-Cycle Proteins for Human CD4+ T-Helper 1 Responses"; Journal of Virology, September 2001, p 8649-8659 See Table 3 (first 3 sequences),	1, 2, 14, 18, 19, 23, 26, 27, 30, 34-36, 39, 42-53
X	THORLEY-LAWSON D A et al.: "Generation of specific cytotoxic T cells with a fragment of the Epstein-Barr virus-encoded p63/latent membrane protein"; Proceedings of the National Academy of Sciences of the USA (1987), 84(15), 5384-8 See particularly p 5385 peptides LMP (43-53), (98-107), and (158-167)	1, 2, 14, 18, 19
X	O'SULLIVAN D ET AL: "Characterization of the specificity of peptide binding to four DR halotypes"; The Journal of Immunology, Vol. 145, No. 6, September 15 1990, pp1799-1808 See whole document, particularly table VII (EBV peptides, especially residues EBV 183-197 and EBV 309-323)	1, 2, 14, 18, 19
X	MEIJ P et al.: "Identification and prevalence of CD8+ T-cell responses directed against Epstein-Barr virus-encoded latent membrane protein 1 and latent membrane protein 2"; International Journal of Cancer, 26 February 2002, 99(1), 93-99 See whole document and also table I (3rd, 4th and 5th epitope sequences), table II (sequences in A and B)	1, 14, 18, 19, 23, 26, 27, 30, 34-36, 39, 42-53
X	KHANNA R et al.: "Identification of cytotoxic T cell epitopes within Epstein-Barr virus (EBV) oncogene latent membrane protein 1 (LMP1). Evidence for HLA A2 supertype-restricted immune recognition of EBV-infected cells by LMP1-specific cytotoxic T lymphocytes"; European Journal of Immunology (1998), 28(2), 451-458 See whole document and table 1 (2nd - 5th and 7th - 11th sequences)	1, 14, 18, 19, 23, 26, 27, 30, 34-36, 39, 42-50

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2003/001451

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	DURAI SWAMY J et al: "Ex Vivo Analysis of T-Cell Responses to Epstein-Barr Virus-Encoded Oncogene Latent Membrane Protein 1 Reveals highly Conserved Epitope Sequences in Virus Isolates from Diverse Geographic Regions"; Journal of Virology, July 2003, pp7401-7410 See whole document, especially table 1.	1-54
P, X	DURAI SWAMY J et al: "Therapeutic LMP1 polypeptide vaccine for EBV-associated Hodgkin disease and nasopharyngeal carcinoma"; Blood, 15 April 2003, 101(8), 3150-3156 See whole document and also table 1 (3 rd , 4 th , 5 th and 6 th epitope sequences)	1, 14, 18, 19, 23, 26, 27, 30, 34-36, 39, 42-53
A	KHANNA R et al.: "Activation and adoptive transfer of Epstein-Barr virus-specific cytotoxic T cells in solid organ transplant patients with posttransplant lymphoproliferative disease"; Proceedings of the National Academy of Sciences of the USA (1999), 96(18), 10391-10396 See whole document	1, 14, 18, 19, 23, 26, 27, 30, 34-36, 39, 42-53
A	WO 2001/094944 A2 (MEMORIAL SLOAN-KETTERING CANCER CENTER) 13 December 2001 See whole document	50-53
A	GENPEPT accession no AAA53227; SAMPLE J et al.: "Epstein-Barr virus types 1 and 2 have nearly identical LMP-1 transforming genes"; (& PUBMED 7931160) See sequence	17

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2003/001451

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report			Patent Family Member				
WO	9902550	AU	82000/98	EP	1003773	NZ	501944
		US	2003152582	ZA	9806084		
EP	1229043	EP	1368656	WO	02060930		
JP	2002255997	NONE					
WO	0194944	AU	65346/01	CA	2410510	EP	1287357
		US	2002131960				
END OF ANNEX							